Section 7

Landfill Gas Safety Guidelines

All personnel conducting gas monitoring shall follow all OSHA health and safety practices for working in a hazardous site. It is recommended that all sampling personnel have 40 hour OSHA training.

Personnel operating safety equipment around the landfill must be thoroughly trained in its use and have a clear understanding of the meaning of observations made with the monitoring equipment. Monitoring equipment must also be periodically calibrated to ensure continued accuracy in the results.

The following safety guidelines are recommended for use by personnel when working at a landfill in the presence of potentially dangerous gases:

1. No person should enter a vault or trench on a landfill without first checking for the presence of methane gas. The person should also wear a safety harness with a second person standing by to pull him or her to safety.

2. Anyone installing wells in a landfill should wear a safety rope to prevent falling in the borehole. Open holes should be covered when they are left unattended.

3. Smoking should be prohibited on the landfill where drilling, excavating, or installation of equipment is taking place or where gas is venting from the landfill.

4. Collected gas from a mechanically evacuated system should always be properly managed to minimize air pollution and any potential explosion or fire hazard.

5. Methane gas in a concentration of 5 to 15 percent is an explosive mixture. Gas accumulations should be monitored in enclosed structures to insure that explosive conditions are avoided and, if detected, appropriate action is taken to avoid a source of ignition and to vent the structure.

Note: Reference No. 2 from the list of Bibliography/References provides additional guidelines on health and safety issues.

Bibliography/References

1. Solid Waste Association of North America: "Landfill Gas Operation and Maintenance Manual of Practice." (March 1997).

2. U. S. EPA: "Solid Waste Disposal Facility Criteria: Technical Manual," EPA 530-R-93-017, U. S. EPA Office of Solid Waste and Emergency Response, Washington, DC, NTIS PB 94-100-450 (1993).

3. U. S. EPA: Seminar Publication, "Design, Operation, and Closure of Municipal Solid Waste Landfill," EPA/625/R-94/008, U. S. EPA Office of Research and Development, (September, 1994).

4. Richardson, G. N.: "Design of Waste Containment Liner and Final Closure System," American Society of Civil Engineers, 1995.

5. U. S. EPA: "Guide to Technical Resources for the Design of Landfill Disposal Facilities," EPA/625-6-88/018, U. S. EPA Office of Research and Development, Cincinnati, Ohio, (December 1988).

6. Solid Waste Association of North America: "A Compilation of Landfill Gas Field Practices and Procedures," (March 1992).

7. Landfill Control Technologies: "Landfill Gas System Engineering Design - A Practical Approach," (1994).

8. U. S. EPA: "Subtitle D Technical Training Manual," U. S. EPA Region IV, Atlanta, GA., November, 1993.

9. Edward A. McBean, Frank A. Rovers and Grahame J. Farquhar: "Solid Waste Landfill Engineering and Design", Prentice Hall, 1995

Attachment 1:

Methane Monitoring Probe Log

Probe Monitoring Reading Sheet
Probe Testing

INSTRUMENT USED:	
DATE:	
SITE:	
TECHNICIAN:	
WEATHER CONDITION:	
BAROMETRIC PRESSURE:	

Probe Location	Probe Pressure (in. water)	Constant 30 Second Field Reading			Probe CO2 %	Probe Testing Time hh:mm	Probe Depth (feet)	Probe Evacuation Time (seconds)
		Vault CH4 %	Probe CH4 %	Probe O2 %				

NM = Not Measured ND = Not Detected TR = Trace OR = Over Instrument Range

Reviewed: _____ Date: _____ Signed: _____